Kylie A Vincent

List of Publications by Year
in descending order

79	5,563	37	74
papers	citations	h-index	g-index
		108046	87275

86	86	86	5608
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Synthesis of [4 S â€•2 H]NADH, [4 R â€•2 H]NADH, [4â€•2 H 2]NADH and [4â€•2 H]NAD + cofactors through heterogeneous biocatalysis in heavy water. Journal of Labelled Compounds and Radiopharmaceuticals, 2021, 64, 181-186.	0.5	2
2	Chemo-bio catalysis using carbon supports: application in H₂-driven cofactor recycling. Chemical Science, 2021, 12, 8105-8114.	3.7	12
3	The crystalline state as a dynamic system: IR microspectroscopy under electrochemical control for a [NiFe] hydrogenase. Chemical Science, 2021, 12, 12959-12970.	3.7	8
4	Hybrid Chemo-, Bio-, and Electrocatalysis for Atom-Efficient Deuteration of Cofactors in Heavy Water. ACS Catalysis, 2021, 11, 2596-2604.	5.5	13
5	E. coli Nickelâ€Iron Hydrogenase 1 Catalyses Nonâ€native Reduction of Flavins: Demonstration for Alkene Hydrogenation by Old Yellow Enzyme Eneâ€reductases**. Angewandte Chemie, 2021, 133, 13943-13947.	1.6	0
6	<i>E. coli</i> Nickelâ€Iron Hydrogenase 1 Catalyses Nonâ€native Reduction of Flavins: Demonstration for Alkene Hydrogenation by Old Yellow Enzyme Eneâ€reductases**. Angewandte Chemie - International Edition, 2021, 60, 13824-13828.	7.2	8
7	Boosting the Productivity of H2-Driven Biocatalysis in a Commercial Hydrogenation Flow Reactor Using H2 From Water Electrolysis. Frontiers in Chemical Engineering, 2021, 3, .	1.3	7
8	Electrochemical control of [FeFe]-hydrogenase single crystals reveals complex redox populations at the catalytic site. Dalton Transactions, 2021, 50, 12655-12663.	1.6	11
9	Biocatalytic hydrogenations on carbon supports. Methods in Enzymology, 2020, 630, 303-325.	0.4	5
10	Carbon as a Simple Support for Redox Biocatalysis in Continuous Flow. Organic Process Research and Development, 2020, 24, 2281-2287.	1.3	12
11	Dihydrogenâ€Driven NADPH Recycling in Imine Reduction and P450â€Catalyzed Oxidations Mediated by an Engineered O₂â€Tolerant Hydrogenase. ChemCatChem, 2020, 12, 4853-4861.	1.8	10
12	Bringing biocatalytic deuteration into the toolbox of asymmetric isotopic labelling techniques. Nature Communications, 2020, 11, 1454.	5.8	57
13	Inorganic reaction mechanisms. Dalton Transactions, 2020, 49, 4597-4598.	1.6	0
14	Janus Structured Multiwalled Carbon Nanotube Forests for Simple Asymmetric Surface Functionalization and Patterning at the Nanoscale. ACS Applied Nano Materials, 2020, 3, 7554-7562.	2.4	2
15	Rapid, Heterogeneous Biocatalytic Hydrogenation and Deuteration in a Continuous Flow Reactor. ChemCatChem, 2020, 12, 3913-3918.	1.8	15
16	Unifying Activity, Structure, and Spectroscopy of [NiFe] Hydrogenases: Combining Techniques To Clarify Mechanistic Understanding. Accounts of Chemical Research, 2019, 52, 3120-3131.	7.6	24
17	Dioxygen controls the nitrosylation reactions of a protein-bound [4Fe4S] cluster. Dalton Transactions, 2019, 48, 13960-13970.	1.6	10
18	Editorial overview: New pieces in the redox puzzle: oxidative and reductive transformations in biotechnology. Current Opinion in Chemical Biology, 2019, 49, A1-A3.	2.8	0

#	ARTICLE	IF	CITATIONS
19	Mechanistic Exploitation of a Self-Repairing, Blocked Proton Transfer Pathway in an O₂-Tolerant [NiFe]-Hydrogenase. Journal of the American Chemical Society, 2018, 140, 10208-10220.	6.6	33
20	Adsorbed Intermediates in Oxygen Reduction on Platinum Nanoparticles Observed by Inâ€…Situ IR Spectroscopy. Angewandte Chemie - International Edition, 2018, 57, 12855-12858.	7.2	97
21	Adsorbed Intermediates in Oxygen Reduction on Platinum Nanoparticles Observed by Inâ€…Situ IR Spectroscopy. Angewandte Chemie, 2018, 130, 13037-13040.	1.6	23
22	Enzymes as modular catalysts for redox half-reactions in H2-powered chemical synthesis: from biology to technology. Biochemical Journal, 2017, 474, 215-230.	1.7	45
23	Proton Transfer in the Catalytic Cycle of [NiFe] Hydrogenases: Insight from Vibrational Spectroscopy. ACS Catalysis, 2017, 7, 2471-2485.	5.5	62
24	Generating single metalloprotein crystals in well-defined redox states: electrochemical control combined with infrared imaging of a NiFe hydrogenase crystal. Chemical Communications, 2017, 53, 5858-5861.	2.2	18
25	Electrochemical CO Oxidation at Platinum on Carbon Studied through Analysis of Anomalous in Situ IR Spectra. Journal of Physical Chemistry C, 2017, 121, 17176-17187.	1.5	54
26	H₂-Driven biocatalytic hydrogenation in continuous flow using enzyme-modified carbon nanotube columns. Chemical Communications, 2017, 53, 9839-9841.	2.2	48
27	Infrared spectroscopy of the nitrogenase MoFe protein under electrochemical control: potential-triggered CO binding. Chemical Science, 2017, 8, 1500-1505.	3.7	38
28	Protein Film Infrared Electrochemistry Demonstrated for Study of H₂ Oxidation by a [NiFe] Hydrogenase. Journal of Visualized Experiments, 2017, , .	0.2	7
29	Spectroscopic Methods for Characterizing Redox Chemistry at Metalloprotein-Modified Electrodes. , 2017, , 545-561.		1
30	Formate adsorption on Pt nanoparticles during formic acid electro-oxidation: insights from in situ infrared spectroscopy. Chemical Communications, 2016, 52, 12665-12668.	2.2	18
31	Vibrational Spectroscopic Techniques for Probing Bioelectrochemical Systems. Advances in Biochemical Engineering/Biotechnology, 2016, 158, 75-110.	0.6	2
32	Mechanism for rapid growth of organicâ€“inorganic halide perovskite crystals. Nature Communications, 2016, 7, 13303.	5.8	191
33	A tunable metalâ€“polyaniline interface for efficient carbon dioxide electro-reduction to formic acid and methanol in aqueous solution. Chemical Communications, 2016, 52, 13901-13904.	2.2	36
34	Synchrotron-Based Infrared Microanalysis of Biological Redox Processes under Electrochemical Control. Analytical Chemistry, 2016, 88, 6666-6671.	3.2	19
35	Enzymeâ€Modified Particles for Selective Biocatalytic Hydrogenation by Hydrogenâ€Driven NADH Recycling. ChemCatChem, 2015, 7, 3480-3487.	1.8	47
36	Infrared Spectroscopy During Electrocatalytic Turnover Reveals the Niâ€Ł Active Site State During H₂ Oxidation by a NiFe Hydrogenase. Angewandte Chemie - International Edition, 2015, 54, 7110-7113.	7.2	115

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37	Infrared Spectroscopy During Electrocatalytic Turnover Reveals the Niâ€L Active Site State During H₂ Oxidation by a NiFe Hydrogenase. Angewandte Chemie, 2015, 127, 7216-7219.	1.6	17
38	Combining Noble Metals and Enzymes for Relay Cascade Electrocatalysis of Nitrate Reduction to Ammonia at Neutral pH. ChemElectroChem, 2015, 2, 1086-1089.	1.7	25
39	Discovery of Dark pH-Dependent H⁺ Migration in a [NiFe]-Hydrogenase and Its Mechanistic Relevance: Mobilizing the Hydrido Ligand of the Ni-C Intermediate. Journal of the American Chemical Society, 2015, 137, 8484-8489.	6.6	65
40	Electrochemical and Infrared Spectroscopic Studies Provide Insight into Reactions of the NiFe Regulatory Hydrogenase from <i>Ralstonia eutropha</i> with O₂ and CO. Journal of Physical Chemistry B, 2015, 119, 13807-13815.	1.2	30
41	Electrocatalysis by Hydrogenases: Lessons for Building Bio-Inspired Devices. Journal of the Brazilian Chemical Society, 2014, , .	0.6	1
42	Comparison of carbon materials as electrodes for enzyme electrocatalysis: hydrogenase as a case study. Faraday Discussions, 2014, 172, 473-496.	1.6	28
43	Unusual Reaction of [NiFe]-Hydrogenases with Cyanide. Journal of the American Chemical Society, 2014, 136, 10470-10477.	6.6	16
44	Infrared Spectroscopy Provides Insight into the Role of Dioxygen in the Nitrosylation Pathway of a [2Fe2S] Cluster Ironâ€“Sulfur Protein. Journal of the American Chemical Society, 2014, 136, 11236-11239.	6.6	17
45	H₂â€driven cofactor regeneration with <scp>NAD</scp>(<scp>P</scp>)⁺â€reducing hydrogenases. FEBS Journal, 2013, 280, 3058-3068.	2.2	68
46	Attenuated total reflectance infrared spectroelectrochemistry at a carbon particle electrode; unmediated redox control of a [NiFe]-hydrogenase solution. Physical Chemistry Chemical Physics, 2013, 15, 7055.	1.3	32
47	Spectroscopic analysis of immobilised redox enzymes under direct electrochemical control. Chemical Communications, 2012, 48, 1400-1409.	2.2	50
48	A modular system for regeneration of NADcofactors using graphite particles modified with hydrogenase and diaphorase moieties. Chemical Communications, 2012, 48, 1589-1591.	2.2	48
49	Development of an infrared spectroscopic approach for studying metalloenzyme active site chemistry under direct electrochemical control. Faraday Discussions, 2011, 148, 345-357.	1.6	13
50	Catalytic Properties of the Isolated Diaphorase Fragment of the NAD+-Reducing [NiFe]-Hydrogenase from Ralstonia eutropha. PLoS ONE, 2011, 6, e25939.	1.1	43
51	Electrically conducting particle networks in polymer electrolyte as three-dimensional electrodes for hydrogenase electrocatalysis. Electrochimica Acta, 2011, 56, 10786-10790.	2.6	12
52	The Hydrogenase Subcomplex of the NAD⁺â€Reducing [NiFe] Hydrogenase from <i>Ralstonia eutropha</i> â€“ Insights into Catalysis and Redox Interconversions. European Journal of Inorganic Chemistry, 2011, 2011, 1067-1079.	1.0	47
53	Triggered infrared spectroscopy for investigating metalloprotein chemistry. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 3713-3731.	1.6	4
54	Wiring an [FeFe]-Hydrogenase with Photosystem I for Light-Induced Hydrogen Production. Biochemistry, 2010, 49, 10264-10266.	1.2	120

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55	Uncoupling Nitrogenase: Catalytic Reduction of Hydrazine to Ammonia by a MoFe Protein in the Absence of Fe Protein-ATP. Journal of the American Chemical Society, 2010, 132, 13197-13199.	6.6	65
56	Oxygen-tolerant H2 Oxidation by Membrane-bound [NiFe] Hydrogenases of Ralstonia Species. Journal of Biological Chemistry, 2009, 284, 465-477.	1.6	112
57	Oxidation of dilute H2 and H2/O2 mixtures by hydrogenases and Pt. Electrochimica Acta, 2009, 54, 5011-5017.	2.6	18
58	Dynamic electrochemical investigations of hydrogen oxidation and production by enzymes and implications for future technology. Chemical Society Reviews, 2009, 38, 36-51.	18.7	265
59	How oxygen attacks [FeFe] hydrogenases from photosynthetic organisms. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 17331-17336.	3.3	302
60	Infrared Spectroelectrochemistry. , 2008, , 1-30.		7
61	Enzymes as Working or Inspirational Electrocatalysts for Fuel Cells and Electrolysis. Chemical Reviews, 2008, 108, 2439-2461.	23.0	918
62	Hydrogen Production under Aerobic Conditions by Membrane-Bound Hydrogenases from Ralstonia Species. Journal of the American Chemical Society, 2008, 130, 11106-11113.	6.6	94
63	Enzymatic Oxidation of H₂ in Atmospheric O₂:â€‰ The Electrochemistry of Energy Generation from Trace H₂ by Aerobic Microorganisms. Journal of the American Chemical Society, 2008, 130, 424-425.	6.6	57
64	Investigating and Exploiting the Electrocatalytic Properties of Hydrogenases. Chemical Reviews, 2007, 107, 4366-4413.	23.0	687
65	Enzymatic catalysis on conducting graphite particles. Nature Chemical Biology, 2007, 3, 761-762.	3.9	63
66	Rapid and Efficient Electrocatalytic CO₂/CO Interconversions by <i>Carboxydothermus </i><i>hydrogenoformans</i> CO Dehydrogenase I on an Electrode. Journal of the American Chemical Society, 2007, 129, 10328-10329.	6.6	181
67	Electricity from low-level H2 in still air ? an ultimate test for an oxygen tolerant hydrogenase. Chemical Communications, 2006, , 5033.	2.2	126
68	Rapid and Reversible Reactions of [NiFe]-Hydrogenases with Sulfide. Journal of the American Chemical Society, 2006, 128, 7448-7449.	6.6	55
69	From The Cover: Electrocatalytic hydrogen oxidation by an enzyme at high carbon monoxide or oxygen levels. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 16951-16954.	3.3	250
70	Hydrogen cycling by enzymes: electrocatalysis and implications for future energy technology. Dalton Transactions, 2005, , 3397.	1.6	38
71	Electrochemical Definitions of O2 Sensitivity and Oxidative Inactivation in Hydrogenases. Journal of the American Chemical Society, 2005, 127, 18179-18189.	6.6	208
72	Investigating Metalloenzyme Reactions Using Electrochemical Sweeps and Steps:Â Fine Control and Measurements with Reactants Ranging from Ions to Gases. Inorganic Chemistry, 2005, 44, 798-809.	1.9	46

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73	Synergic Binding of Carbon Monoxide and Cyanide to the FeMo Cofactor of Nitrogenase: Relic Chemistry of an Ancient Enzyme?. Chemistry - A European Journal, 2004, 10, 4770-4776.	1.7	27
74	Electron-Transfer Chemistry of the Ironâ€“Molybdenum Cofactor of Nitrogenase: Delocalized and Localized Reduced States of FeMoco which Allow Binding of Carbon Monoxide to Iron and Molybdenum. Chemistry - A European Journal, 2003, 9, 76-87.	1.7	56
75	Hydrogenase on an electrode: a remarkable heterogeneous catalyst. Dalton Transactions, 2003, , 4152-4157.	1.6	40
76	Instantaneous, stoichiometric generation of powerfully reducing states of protein active sites using Eu(ii) and polyaminocarboxylate ligands. Chemical Communications, 2003, , 2590.	2.2	77
77	Enzyme Electrokinetics:Â Electrochemical Studies of the Anaerobic Interconversions between Active and Inactive States ofAllochromatium vinosum[NiFe]-hydrogenase. Journal of the American Chemical Society, 2003, 125, 8505-8514.	6.6	151
78	The isolated ironâ€“molybdenum cofactor of nitrogenase binds carbon monoxide upon electrochemically accessing reduced states. Chemical Communications, 1999, , 1019-1020.	2.2	25
79	H2-Driven Reduction of Flavin by Hydrogenase Enables Cleaner Operation of Nitroreductases for Nitro-Group to Amine Reductions. Frontiers in Catalysis, 0, 2, .	1.8	3